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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kenji Hyodo

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EXAMINER

CHIO, TAT CHI

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,862	Applicant(s) HYODO, KENJI	
	Examiner TAT CHIO	Art Unit 2481	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/2010 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

3. A claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

(A) the claim limitations must use the phrase "means for" or "step for;"

(B) the "means for" or "step for" must be modified by functional language;

and

(C) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function.

In this case, claim 1 recites data forming means for forming second video data which is data based on first video data and whose transmission rate and resolution are lower than those of said first video data, forming second audio data by compression encoding first audio data, said second audio data having a plurality of channels which is

data based on said first audio data having zero, one, or a plurality of channels corresponding to said first video data and recording means for recording said first video data, said first audio data, said low-rate data, and meta data corresponding to the first video data and first audio data onto the disc-shaped recording medium.

These limitations meet the three-prong analysis since they use the phrase "means for," the "means for" is modified by function language (forming second video data which is data based on first video data and whose transmission rate and resolution are lower than those of said first video data, forming second audio data by compression encoding first audio data, said second audio data having a plurality of channels which is data based on said first audio data having zero, one, or a plurality of channels corresponding to said first video data and recording said first video data, said first audio data, said low-rate data, and meta data corresponding to the first video data and first audio data onto the disc-shaped recording medium), and the phrase "means for" is not modified by sufficient structure, material, or acts for achieving the specified function. Therefore, these limitations will be treated under 35 U.S.C. 112, sixth paragraph.

The structure corresponding to the data forming means in the specification is 16 of Fig. 14. The structure corresponding to the recording means in the specification is 13 of Fig. 14.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 3 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, a recording method of recording video and audio data onto a disc-shaped recording medium comprising data forming and recording steps is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al. (US 6,339,676 B1) in view of Kawamura et al. (6,075,920), Tanaka (5,541,739), Naimpally (5,589,993), and Furukawa (US 2003/0215212 A1).

Consider claims 1 and 3, Amada teaches a recording apparatus for recording video data and audio data corresponding to the video data onto a recording medium,

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comprising: **data forming means for forming second video data which is data based on first video data and whose transmission rate is lower than that of said first video data** (col. 13, lines 41-45 teaches in the case of the long play mode in which a digital video and audio signal having a transmission bit rate which is $1/N$ of the standard transmission bit rate), **forming second audio data by compression encoding first audio data, said second audio data having a plurality of channels which is data based on said first audio data having zero, one, or a plurality of channels corresponding to said first video data and whose transmission rate is lower than that of said first audio data** (col. 13, lines 41-45 teaches in the case of the long play mode in which a digital video and audio signal having a transmission bit rate which is $1/N$ of the standard transmission bit rate, col. 4, lines 1-16 teaches audio signal components of left/right or main/sub two channels of an analog audio signal fed from the input terminal are each subjected to FM modulation by means of the analog audio recording signal processing circuit), **and outputting data of a low rate in which said second video data and said second audio data have been multiplexed** (col. 4, lines 1-16 teaches In the figure, a luminance signal component and a chrominance signal component of an analog video signal fed from the input terminal 11 undergo FM modulation and down conversion, respectively, by means of the analog video recording signal processing circuit 12, and resulting signals are added together so as to be converted into an analog video recording signal SR1. On the other hand, audio signal components of left/right or main/sub two channels of an analog audio signal fed from the input terminal 21 are each subjected to FM modulation by means of the analog

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audio recording signal processing circuit 22, and resulting signals are added together so as to be converted into an analog audio recording signal SR2); **recording means for recording said first video data, said first audio data, and said low-rate data corresponding to the first video data and first audio data in sequence onto the recording medium** (Fig. 1 and Fig. 7 show the recording means 5 (a rotary drum) and 6 (a magnetic tape) and col. 13, line 63-col. 14, line 14 teaches recording is effected by the magnetic head 2a or 2c during a period of low level and recording is effected by the magnetic head 2b during a period of high level. Col. 14, lines 52-67 teaches in the case of the standard play mode, a continuous recording signal is recorded and in the case of the long play mode, a recording signal which is compressed on time domain to 1/N in synchronism with the rotation of the rotary drum is recorded).

However, Amada et al. do not explicitly teach the second video data whose resolution is lower than the first video data and wherein said data forming means sets said number of channels of said second audio data to a fixed value independent of change of said number of channels of said first audio data during recording process and recording means for recording meta data corresponding to the first video data and first audio data onto the disc-shaped recording medium.

Kawamura et al. **teach recording means for recording meta data corresponding to the first video data and first audio data onto the disc-shaped recording medium** (Fig. 1 teaches recording subcode data such as time code info in a disc and Fig. 3-Fig. 5 teaches the subcode data) **and wherein said first video data, said first audio data, said low-rate data, and said meta data are recorded in**

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continuous areas on the disc-shaped recording medium and are recorded in a particular sequence (Fig. 1 teaches recording of audio, video and subcode data. Fig. 3-Fig. 5 teaches the structure (sequence) of the audio, video, and subcode data. Also, Fig. 4 teaches that packets are continuously recorded in a sector). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate recording meta data corresponding to the first video data and first audio data onto the disc-shaped recording medium to improve device taught by Amada because such incorporation would provide information about the AV data to the user.

Tanaka teaches **data forming means sets said number of channels of said second audio data to a fixed value independent of change of said number of channels of said first audio data during recording process** (col. 2, lines 23-41 teaches audio input means for receiving n channel digital audio signals and mode changeover means for changing over the apparatus between a plurality of modes which includes a first mode in which the digital video signal supplied from the video input means without passing through the video compressing means and all of the n channel digital audio signals supplied from the audio input means are recorded by the recording means) **and the number of channels of said second audio data is not less than the number of channels of said first audio data** (col. 4, lines 46-52 teaches in cases where a lower tone quality is allowable for the LP mode than the tone quality obtainable in the SP mode, all of the four channel audio signals are recorded). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the technique of selectively recording audio channels to improve the

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device taught by Amada and Kawamura because such incorporation would permit long-time recording of the digital signal without impairing the quality of the audio signals.

Naimpally teaches **the second video data whose resolution is lower than the first video data** (claim 1 teaches data compression means for compressing the first data stream to generate a segmented second data stream representing a relatively low resolution version of said high resolution image). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate forming a lower resolution version of the video content to improve the device taught by Amada, Kawamura, and Tanaka because such incorporation would facilitate efficient data transmission.

Furukawa teaches **annual ring data of said first audio data, annual ring data of said first video data, annual ring data of said low-rate data, and annual ring data of said meta data are recorded in order from an inner rim side of the disc-shaped recording medium** (Fig. 27 teaches audio annual-ring data #1, video annual-ring data #1, low-resolution annual-ring data #1, and meta data annual-ring #1 are recorded in order from an inner rim side of the disc). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate this arrangement of data to improve the device taught by Amada, Kawamura, Tanaka, and Naimpally because such incorporation would provide easy access to the same pair of AV data.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al. (US 6,339,676 B1) in view of Kawamura et al. (6,075,920), Tanaka (5,541,739),

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Naimpally (5,589,993), and Furukawa (US 2003/0215212 A1) as applied to claim 1 above, and further in view of Kuroiwa et al. (US 6,788,881 B1).

Consider claim 2, Amada et al. teach a recording apparatus, wherein **said data forming means forms audio data showing silence to the channels which do not correspond to the channels of said first audio data among said plurality of channels of said second audio data and outputs said low-rate data** (col. 4, lines 1-16 teaches audio components of left/right or main/sub two channels of an analog audio signal fed from the input terminal are each subjected to FM modulation by means of the analog audio recording signal processing circuit. Therefore, if one of the input audio channels is missing, then the output of that channel also has no audio.)

However, Amada et al., Kawamura et al., Tanaka, and Naimpally do not explicitly teach said second video data and said second audio data including the channels of the audio data showing said silence have been multiplexed.

Kuroiwa et al. teach said second video data and said second audio data including the channels of the audio data showing said silence have been multiplexed (col. 6, lines 55-65 teaches the judging unit determines whether the recorded audio data is silence data according to the audio content data. If it is the silence data, the judging unit judges that after-recording of audio signal is allowed and Fig. 6. Also, Fig. 4 shows that the audio data and video data are multiplexed). Therefore, it would have been obvious to apply the technique of including the channels of audio data showing said silence have been multiplexed to improve the device taught by Amada, Kawamura,

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Tanaka, Naimpally, and Furukawa because such incorporation would facilitate faster recording.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAT CHIO whose telephone number is (571)272-9563. The examiner can normally be reached on Monday - Thursday 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter-Anthony Pappas can be reached on 571-272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. C. C./
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/Peter-Anthony Pappas/

Supervisory Patent Examiner, Art Unit 2481